

Election of Claims:

Applicant hereby elects originally presented Claims 1-33 of Invention I. Claims 34-67 of Invention II are withdrawn from consideration.


25315

CUSTOMER NUMBER

- 2 -

INTL-1-1007ROA4

BLACK LOWE & GRAHAM^{PLLC}


701 Fifth Avenue, Suite 4800
Seattle, Washington 98104
206.381.3300 • F: 206.381.3301

In the Claims:

Please amend elected and re-presented claims 1-33 of Invention I as follows:

1. (Currently Amended) A voice communication method comprising:
receiving an acoustic analog signal ~~user voice input~~ at a user system directly from a user;
converting the analog signal to a digital signal;
canceling noise from the digital signal to form a processed digital signal;
detecting user speech in the processed digital signal by evaluating ~~processing the received user voice input at the user system based on~~ two or more of noise cancellation, echo-cancellation or end-pointing, wherein the ~~processed voice~~ detected user speech is in a format capable of being outputted over a speaker;
sending the ~~processed~~ detected user speech ~~voice input~~ to a server over a network;
and
performing speech recognition processing of the sent detected user speech ~~processed user voice input~~ at the server.
2. (Original) The method of claim 1, wherein sending is wirelessly sending.
3. (Original) The method of claim 1, wherein the user system is implemented in a vehicle.
4. (Previously Presented) The method of claim 1, wherein processing of the received user voice input is further based on sampling the received user voice input.
5. (Cancelled).
6. (Previously Presented) The method of claim 1, further comprising performing a function at the server based on the performed speech recognition processing.

7. (Previously Presented) The method of claim 1, further comprising receiving user system status information, and wherein sending the processed user voice input to a server over a network sends the user system status information with the processed user voice input based on transmission requirements.

8. (Previously Presented) The method of claim 7, wherein sending the processed user voice input to a server over a network includes sending the user system status information and the processed user voice input in interspersed distinct transmission packets.

9. (Previously Presented) The method of claim 7, wherein sending the processed user voice input to a server over a network sends only the user system status information when no user voice is received.

10. (Cancelled).

11. (Currently Amended) A voice communication method comprising:

receiving an acoustic analog signal ~~user voice input~~ at a user system directly from a user;

converting the analog signal to a digital signal;

canceled noise from the digital signal to form a processed digital signal;

detecting user speech in the processed digital signal by evaluating ~~processing the received user voice input at the user system based on~~ two or more of noise cancellation, echo-cancellation or end-pointing, wherein the ~~processed voice~~ detected user speech is in a format capable of being outputted over a speaker;

sending the ~~processed user voice~~ detected user speech input to a server over a network;

performing speech recognition processing of the detected user speech ~~sent front-end~~ ~~processed user voice input at the server;~~ and

performing a function at the server based on the performed speech recognition processing.

12. (Cancelled).

13. (Currently Amended) A voice communication system comprising:

a user system comprising:

a microphone configured to receive user ~~voice input~~ acoustic analog signals;

a processor configured to convert the analog signals to digital signals and process the received user voice input based on two or more of noise cancellation, echo-cancellation or end-pointing to form a processed voice signal, wherein the processed voice signal is in a format capable of being outputted over a speaker; and

a communication component configured to send the processed ~~user voice~~ input signal to a destination over a network; and

a server system coupled to the network, the server comprising:

a communication component configured to receive the sent processed ~~user voice~~ signal input; and

a processor configured to perform speech recognition processing of the sent processed ~~user voice input~~ signal.

14. (Original) The system of claim 13, wherein the communication component of the user system communicates wirelessly.

15. (Original) The system of claim 13, wherein the user system is implemented in a vehicle.

16. (Original) The system of claim 13, wherein the processor of the user system comprises a sampling component configured to sample the received user voice input.

17. (Cancelled).

18. (Previously presented) The system of claim 13, wherein the processor of the server comprises a component configured to perform a function based on the performed speech recognition processing.

19. (Original) The system of claim 13, wherein the user system further comprises removable modules.

20. (Original) The system of claim 19, wherein
the modules comprise a processing module; and
the processor of the user system comprises a sampling component configured to sample the received user voice input.

21. (Cancelled).

22. (Original) The system of claim 19, wherein the modules comprise at least one of a positioning module, a phone adapter module, or a wireless network communication module.

23. (Cancelled).

24. (Currently Amended) A voice communication system comprising:

a means for receiving user ~~voice input~~ acoustic analog signals at a user system directly by a user;

a means for converting the analog signals to digital signals;

a means for processing the ~~received user voice input~~ digital signals at the user system based on two or more of noise cancellation, echo-cancellation or end-pointing to form a processed voice signal, wherein the processed voice signal is in a format capable of being outputted over a speaker;

a means for sending the processed voice signal ~~user voice input~~ to a server over a network; and

a means for performing speech recognition processing of the sent processed ~~user~~ voice signal ~~input~~ at the server.

25. (Original) The system of claim 24, wherein the means for sending is a means for wirelessly sending.

26. (Original) The system of claim 24, wherein the user system is implemented in a vehicle.

27. (Previously presented) The system of Claim 24, wherein the means for processing the received user voice input comprises a means for sampling the received user voice input.

28. (Cancelled).

29. (Previously presented) The system of Claim 24, further comprising a means for performing a function at the server based on the performed speech recognition processing.

30. (Previously presented) The system of Claim 24, further comprising a means for receiving user system status information, and wherein the means for sending the processed user voice input to a server over a network sends the user system status information with the processed user voice input based on transmission requirements.

31. (Previously presented) The system of claim 30, wherein the user system status information and the processed user voice input are sent in interspersed distinct transmission packets.

32. (Previously presented) The system of claim 30, wherein the means for sending the processed user voice input to a server over a network sends only the user system status information when no user voice is input at the means for receiving.

33. (Cancelled).

34. (Withdrawn) A method for digital signal manipulation, comprising:
- receiving an acoustic analog signal at a user system;
 - converting the analog signal to a digital signal;
 - canceling noise from the digital signal to form a processed digital signal;
 - detecting user speech in the processed digital signal by evaluating change in amplitude sign of the processed digital signal; and
 - if user speech is detected in the processed digital signal,
 - packaging the user speech into speech packets to form a packaged voice signal;
 - selecting a transmission format compatible with the packaged voice signal; and
 - transmitting the packaged voice signal to a server.
35. (Withdrawn) The method of claim 34, wherein digital signal noise comprises echoes.
36. (Withdrawn) The method of claim 34, wherein detecting user speech comprises evaluating rate of amplitude change in the processed digital signal.
37. (Withdrawn) The method of claim 34, comprising:
- matching the user speech of the voice signal with instructions stored in the server database; and
 - executing the instructions stored in the server database based on the user speech of the voice signal.
38. (Withdrawn) The method of claim 37, wherein matching the user speech at the server comprises statistical modeling and grammar analysis of the user speech.

39. (Withdrawn) The method of claim 34, wherein the user system is implemented in a vehicle.

40. (Withdrawn) The method of claim 34, wherein the packaged voice signal is transmitted to the server via wireless transmission.

41. (Withdrawn) The method of claim 34, comprising
receiving non-acoustic data at the user system; and
if user speech is not detected in the processed digital signal,
packaging the non-acoustic data into data packets to form a packaged data
signal;
selecting a transmission format compatible with the packaged data signal;
and
transmitting the packaged data signal to a server.

42. (Withdrawn) The method of claim 41, wherein the packaged data signal is transmitted to the server using a maximum possible bandwidth.

43. (Withdrawn) The method of claim 34, wherein if user speech is detected in the processed digital signal, comprising:
evaluating the processed digital signal to determine whether data exist that enhances
speech detection and matching at the server; and
if data from the processed digital signal exist to be transmitted to the server to
enhance speech detection and matching at the server,
packaging the data from the processed digital signal into data packets; and
interspersing data packets with the voice packets.

44. (Withdrawn) A method for digital signal manipulation, comprising:
- receiving an acoustic analog signal at a user system;
 - converting the analog signal to a digital signal;
 - canceling noise and echoes from the digital signal to form a processed digital signal;
 - detecting user speech in the processed digital signal by evaluating change in amplitude sign of the processed digital signal; and
 - if user speech is detected in the processed digital signal,
 - packaging the user speech into speech packets to form a packaged voice signal;
 - selecting a transmission format compatible with the packaged voice signal; and
 - transmitting the packaged voice signal to a server.
45. (Withdrawn) The method of claim 44, wherein detecting user speech comprises evaluating rate of amplitude change in the processed digital signal.
46. (Withdrawn) The method of claim 44, comprising:
- matching the user speech of the voice signal with instructions stored in the server database; and
 - executing the instructions stored in the server database based on the user speech of the voice signal.
47. (Withdrawn) The method of claim 46, wherein matching the user speech at the server comprises statistical modeling and grammar analysis of the user speech.
48. (Withdrawn) The method of claim 44, wherein the user system is implemented in a vehicle.

49. (Withdrawn) The method of claim 44, wherein the packaged voice signal is transmitted to the server via wireless transmission.

50. (Withdrawn) The method of claim 44, comprising if user speech is not detected in the processed digital signal,

receiving non-acoustic data at the user system; and

packaging the processed digital signal into data packets to form a packaged data signal;

selecting a transmission format compatible with the packaged data signal, and transmitting the packaged data signal to a server.

51. (Withdrawn) The method of claim 41, wherein the packaged data signal is transmitted to the server using a maximum possible bandwidth.

52. (Withdrawn) The method of claim 44, wherein if user speech is detected in the processed digital signal, comprising:

evaluating the processed digital signal to determine whether data exist that enhances speech detection and matching at the server; and

if data from the processed digital signal exists to be transmitted to the server to enhance speech detection and matching at the server,

packaging the data from the processed digital signal into data packets; and interspersing data packets with the voice packets.

53. (Withdrawn) A system comprising:

a user system configured for receiving an acoustic analog signal and converting to a digital signal, where at the user system the system further comprises:

a processor having:

a first algorithm for canceling noise and echoes from the digital signal to form a processed digital signal;

a second algorithm for detecting speech in the processed digital signal by examining for the change in amplitude sign and the rate of amplitude change in the processed digital signal;

a third algorithm for packaging the processed digital signal with data or speech packets in accordance with the detected user speech to form a packaged voice signal;

a fourth algorithm for selecting a transmission format in accord with the packaged voice signal; and

means for transmitting the digital signal to a server, the server having a plurality of algorithms, wherein the plurality of algorithms match the speech content of the packaged voice signal with instructions stored in the server database to execute the instructions.

54. (Withdrawn) The system of claim 53, wherein the second algorithm further includes end-pointing the detected speech.

55. (Withdrawn) The method of claim 53, wherein at the server the method further comprises matching the speech content of the packaged voice signal with instructions stored in the server database and executing the instructions.

56. (Withdrawn) The system of claim 53, wherein the user system is implemented in a vehicle.

57. (Withdrawn) The system of claim 53, wherein transmitting is wireless.

58. (Withdrawn) The system of claim 53, wherein matching the speech content at the server includes statistical modeling and grammar to determine the best form to match the server database stored instructions.

59. (Withdrawn) The system of claim 53, wherein if user speech is detected, a determination is made whether data needs to be added to the packaged voice signal to enhance speech detection and matching at the server.

60. (Withdrawn) The system of claim 59, wherein if the determination is negative, the transmission format for the packaged voice signal is a maximum packet bandwidth.

61. (Withdrawn) The method of claim 59, wherein if the determination is affirmative, the transmission format for the packaged voice signal includes interspersing data packets with voice packets.

62. (Withdrawn) A system comprising:

means for receiving at a user an acoustic analog signal and converting to a digital signal, where at the user system the system further comprises:

means for canceling noise and echoes from the digital signal to form a processed digital signal;

means for detecting user speech in the processed digital signal by examining for the change in amplitude sign and the rate of amplitude change in the processed digital signal;

means for packaging the processed digital signal with data or speech packets in accordance with the user detected user speech to form a packaged voice signal;

means for selecting a transmission format in accord with the packaged voice signal;

means for transmitting the packaged voice signal to a server system,

where the server system further includes:

means for matching the speech content of the packaged voice signal with instructions stored in the server database; and

means for executing the instructions.

63. (Withdrawn) The method of claim 62, comprising if user speech is not detected in the processed digital signal,

receiving non-acoustic data at the user system; and

packaging the processed digital signal into data packets to form a packaged data signal;

selecting a transmission format compatible with the packaged data signal, and

transmitting the packaged data signal to a server.

64. (Withdrawn) The method of claim 62, wherein if user speech is detected in the processed digital signal, comprising:

evaluating the additional digital data to determine whether data exist that enhances speech detection and matching at the server; and

if data from the processed digital signal exists to be transmitted to the server to enhance speech detection and matching at the server,

packaging the data from the processed digital signal into data packets, and interspersing data packets with the voice packets.

65. (Withdrawn) The system of claim 62, wherein matching the speech content at the server includes statistical modeling and grammar to determine the best form to match the server database stored instructions.

66. (Withdrawn) The system of claim 62, wherein if user speech is detected, a determination is made whether data needs to be added to the packaged voice signal to enhance speech detection and matching at the server.

67. (Withdrawn) The system of claim 72, wherein if the determination is negative, the transmission format for the packaged voice signal is a maximum packet bandwidth.